

## Child Labour and Schooling in Rural Areas of Nigeria

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**Abstract:** This paper examined the impact of labour on the formal human capital development of children. The data used for the study was obtained from the 2001 Child Labour Survey conducted by the then Federal Office of Statistics (now National Bureau of Statistics) Data size comprised 20,830 household units with 100,785 individuals of which 25,542 were children between 5 and 17 years. The data were analyzed using sequential probit model. The age of a child was found to be an important determinant of participation in paid employment and enrolment at school as older children were found to be more enrolled than younger ones. Older children were able to combine school with work as it was easier for them to manoeuvre between the two activities. Gender of a child showed that the male children were more favoured in terms of schooling activity. The marginal effect showed that for every six children enrolled, five were males. A biological child of a household head had a greater chance of attending school than a non-biological child. .

**Keywords:** child labour, child schooling, sequential probit model, rural Nigeria

### INTRODUCTION

In developed economies, where human development indices are high, child labour market is almost non-existent. In such societies virtually all children of school age, whether in the rural or urban areas attend school. This ideal situation is however not the case in developing countries, particularly in the rural areas where rural households supply the bulk of the child workers in the economy because rural people only manage to eke out a living from subsistent agriculture. For example, in countries like Norway, with a high human development index, the net primary school enrolment in 2004 was 99 percent (UNDP, 2006). At the other end are the countries with low human development indices where, like in Nigeria the net primary school enrolment in 2004 was 60 percent. The situation

in rural Nigeria is much worse than this national average. The children that are either not enrolled in school or drop out of school constitute the pool of child labour from which family and non-family members find child workers.

In Nigeria, as in most developing countries, the phenomenon is a fundamental problem with consequences on low economic development. The importance of human capital accumulation as a catalyst or pre-requisite for development cannot be over emphasized. Childhood is probably the best time for acquiring knowledge from the formal education system, if schooling is considered as an investment in human capital which yields a return in the labour market. In this sense, it is natural to see schooling as the preferred alternative to child labour (Grootaert, 1998). Child labour is thus a major impediment to economic progress as it hampers human capital

development and the potentials of the economies of developing countries to grow (Ravallion and Wodon, 2000).

The existence of a large number of child workers, beside the social and individual suffering, represents a major development challenge threatening the achievement of the Millennium Development Goals (especially on education and youth empowerment) and hampering the possibility of growth by perpetuating the existence of an unskilled labour force. Most, if not all of these children missing out on primary education are child labourers. Child labour also affects the academic achievement of the considerable number of children who combine school and work, contributing to the early drop-out and entry into full time work. As children are rarely responsible for their own choices, the design of preventive measures requires an understanding of factors influencing household decisions relating to schooling and working. This study therefore, examines the impact of child labour on child schooling.

The number of hours spent working is important as a measure of child welfare (for example, as a measure of forgone leisure), and also, for evaluating the cost of work in terms of human capital accumulation. This paper therefore examines the amount of work supplied by children and the impact on schooling.

#### **THEORETICAL FRAMEWORK FOR HOUSEHOLD DECISION MAKING**

The theoretical framework that guides this work also draws from Chiappori (1992). In the traditional approach to microeconomic

theory, households are considered elementary decision units. They are modelled as 'consumers' in the usual sense, that is, they are characterised by a single utility function that is maximised under a budget constraint.

A generic Becker (1981) type household decision model such as the one articulated by Portner (2001c), or Cigno and Rosati (2000) and summarized by Schultz (1997) assumes that the household acts to maximize utility, which is a function of the number of children, the schooling per child, the leisure time per child, the leisure of the parents, and a composite consumption good. These goods are produced using a composite commodity purchased in the market place and the time of household members. The time inputs to produce the composite consumption well can be supplied by the mother or by the children. Household income can be earned by selling goods produced in a household enterprise or by working as a wage labourer. Inputs to the production of the household enterprise good include physical assets owned by the family and by parent and child labour. Markets for labour, goods, and capital are taken to be perfectly competitive, at least initially. The husband allocates time between market work and leisure; the mother allocates time among market work, child rearing, and home production; and children allocate time among market work, education, leisure, and home production.

The rest of the paper contains the methodology adopted, in the study as well as method of data analysis. This is followed by results and discussion while the last segment concludes the paper.

## METHODOLOGY

**Source and type of data** - This study used the data from the 2001 Child Labour Survey (CLS) which was conducted by the Federal Office of Statistics (FOS, now the National Bureau of Statistics, (NBS). The data were collected using a multi stage sampling technique. The data size comprised 20,830 household units with 100,785 individuals, of which 32,308 were children aged between 5 and 17 years. The statistics obtained were on demographic and socio-economic characteristics of households as well as schooling, non-schooling and work activities of children. The demographic variables include household composition and demographic characteristics, economic characteristics of all members of household aged 5 years and over, household income and expenditure as well as the usual economic activity of children 5-17 years old during the last 12 months. The survey data were generated by states and geo-political zones of North Central, North East, North West, South East, South South and South West.

**Method of data analysis** - Child labour and Child schooling were analysed, child labour supply as a sequential decision making process using a binary probit model.

Model equation specification

$$P_2 = [1 - F(b_1 X)] F(b_2 X)$$

Where

$P_2$  = probability to go to school and to work.

F = Standard normal distribution function

$b_1$  &  $b_2$  = Vectors of model parameters

X = Vectors of explanatory variables

The explanatory variables are:

$$P_2 = [1 - F(b_1^1 X)] F(b_2^1 X)$$

Where

$P_2$  = probability to go to school and to work.

F = Standard normal distribution function

$b_1$  &  $b_2$  = Vectors of model parameters

X = Vectors of explanatory variables

The explanatory variables are:

$X_1$  = Age of the child in completed years

$X_2$  = Square of age of child

$X_3$  = Sex of child (1 = male, 0 = female)

$X_4$  = Earnings from paid employment activities in naira.

$X_5$  = Enrolment status of children (1 = enrolled, 0 = not enrolled)

$X_6$  = Age of household head in completed years.

$X_7$  = Sex of household head (1 male, 0=female)

$X_8$  = Employment status of mother (1 = mother is working, 0 = mother is not working).

$X_9$  = Household size which comprises total person present in household.

$X_{10}$  = Household's main economic activity (1 = Farming, 0 = Non-farming).

$X_{11}$  = Household head with primary school education (1 if household head has primary school education; 0 otherwise).

$X_{12}$  = Household head with secondary school education (1 if household head has secondary school education, 0 otherwise).

$X_{13}$  = Household head with post-secondary education (1, if household head has post-secondary education, 0 otherwise).

$X_{14}$  = Zone Dummy 1 (1, if North East, 0 otherwise).

$X_{15}$  = Zone Dummy 2 (1, if North West, 0 otherwise).

$X_{16}$  = Zone Dummy 3 (1, if South East, 0 otherwise).

$X_{17}$  = Zone Dummy 4 (1, if South South, 0 otherwise).

$X_{18} =$  Zone Dummy 5 (1, if South West, 0 otherwise).

## RESULTS AND DISCUSSION

The result of the determinants of child's participation in paid employment along with school attendance is presented in Table 1 which is the second stage of the sequential probit analysis. The second estimation stage eliminates from the sample, the children who go to school and do not work. The probability to be determined is that of combining schooling and work.

Some children who attend school also work (Dalhi, 2001). In some cases, working actually makes it possible for children to go to school. The result in Table 1 shows that age is a significant variable in the decision to combine work with schooling. As a child grows older, he or she is able to combine work with schooling. The marginal effect shows that as a child's age increases by 1 year, the probability of combining these two activities is about 4 per cent. Similarly, Grootaert and Kabur (1995) in their study found that older children are likely to participate in work and less likely to attend school. In Cote-d'Ivoire, Grootaert (1998) reports that the probability of combining work and school rises with the Childs age, until after a point, after which it becomes more likely that the child drops out.

The coefficient of age squared is also significant. The sign shows that the probability of combining school and work is initially high. But as the child grows older, this probability decreases. This is because school hours are fixed and the number of hours in a day is also fixed. A

child's time is therefore shared between these two activities. Thus, the probability of combining these two activities is possible only up to a certain point after which some trade-offs will necessarily come in. Thus, ability to combine school with work diminishes as the child moves from primary to higher levels.

The gender of the child is also a determinant of whether or not, school activities will be combined with work. The result shows that the male child is more likely to combine these two activities than the female as reflected in the marginal effect value of 1.2 per cent, in favour of the male child. The result by Grootaert 1998 however also shows that girls are less likely to combine school and work and are more likely to drop out of school.

The probability of combining school and work is also influenced by the employment status of the mother. The marginal effect shows a 3.2 per cent increase in the probability of children combining these two activities, if the mother works compared with children of non-working mothers. In essence, children whose mothers are employed are more likely to be able to combine schooling with work.

With respect to the economic activity of household head, the probability of a combined work-school outcome is lower for children from farming households compared with non-farming households. It is however the opposite in Cote-d'Ivoire where the probability of a work- school outcome is higher in farming than non-farming households. Across zones, the probability that children from the North West, South East and South West zones will combine work with school is lower compared with children from the North central zone. The South east and South West zones are also characterised with higher percentage of working mothers, whose income complement the household's income; the need for children to work is

therefore reduced. However, in North West, it has been established that enrolment of children

into primary school is very low compared with the North Central.

Table 6.2: Probability of Working and Schooling

Variable	Probit Coefficient	Standard Error	P  z > z	Marginal Effect
Constant	-2.481	.198	0.000	-
<b>Child characteristics</b>				
Age of Child (ag)	0.231***	0.028	0.000	0.037
Square of Age of Child (g2)	-0.007***	0.001	0.000	-0.001
Sex of Child (Sexchd)	0.074***	0.026	0.005	0.012
<b>Parent Characteristics</b>				
Sex of Household Head (SexHh)	-0.051	0.039	0.198	-0.008
Age of Household Head (age)	0.006	0.005	0.268	-0.001
Employment Status of Mother (mot work)	0.203***	0.030	0.000	0.032
<b>Household Characteristics</b>				
Household Size (hhsz)	-0.004	0.004	0.229	-0.001
Household economic activity (farming)	-0.060**	0.030	0.046	-0.010
Household Head that has Primary School Education (hh-prysec)	0.043	0.033	0.195	-0.067
Household Head that has Secondary School Education (hh-secsc)	0.012	0.044	0.781	-0.002
Household Head that has Tertiary Education (hh-tersec)	0.032	0.061	0.595	-0.005
<b>Location</b>				
North East (zone 2)	0.011	0.042	0.793	0.002
North West (zone 3)	-0.142***	0.425	0.001	-0.021
South East (zone 5)	-1.028***	0.051	0.000	-0.114
South South (zone 4)	0.028	0.037	0.449	-0.005
South West (zone 6)	-0.874***	0.069	0.000	-0.085

Log likelihood ratio = -5842.6072

n = 18234

Chi - Squared = 1176.76

Source: Computer printout of regression result

\*\*\* Significant at 1 per cent.

\*\* Significant at 5 per cent.

### Education and incidence of child labour

The number of hours that a child spends in labour work is important for evaluating the cost of work in terms of human capital accumulation. The links between human capital and child labour is seen here, in the context of the broader role of human capital for economic growth. Generally, economic growth is increasingly based on knowledge, and less on physical capital or natural resources. In other words, the more people have access to knowledge, the greater are its likely economic benefits. This is why it is important to ensure that children have access to school and to quality education. The tobit regression result agrees on

the positive role that education can play in influencing child participation in paid employment and schooling. Child participation in paid employment has been shown to reduce with increase in the number of hours spent for schooling.

Similarly, there is a link between the incidence of child labour as well as years of education of household head. Table 2 shows the relationship between the educational status of household head as well as the incidence of child labour. Participation of children in paid employment is high where the level of education of household head is low and the rate of participation reduces as the educational status of the head improves.

Table 2: Educational status of household head and child labour incidence

Years of Formal Education	Educational Status of Household head	Child Labour Incidence
No Primary Education	58.1	68.7
Primary Education	26.2	48.7
Secondary Education	11.3	44.4
Post Secondary Education	4.3	26.3

Sources: (a) Computation based on FOS/ILO/SIMPOC Survey, 2001  
 (b) Poverty Profile for Nigeria, NBS, 2005.

### Primary school enrolment and incidence of child labour

There is a relationship between the education of parents, school enrolment as well as child labour. Theoretical mechanism draws attention to the impact that parental education has on human capital formation of children. Empirical studies by Psacharopoulos and Arriagada (1989) and Grootaert (1998) have shown that the level of education negatively affects the likelihood of child working. Some studies such as Hind (1996) found that father's education affects boys the most, while others (Canagarajah & Coulombe, 1997) revealed that father's education affects the likelihood of working and mother's education influences only the schooling participation. This is because educated parents have a better appreciation of education and are thus expected to send their children to school rather than the labour market at tender ages. Again, where school – age children are enrolled in schools, the incidence of child labour is expected to be low. Thus the relationship between education and child labour

is such that as parents become more educated, they also ensure that their wards receive the right education which will ultimately result into low incidence of labour.

Table 3 compares the adult literacy rate and primary school enrolments in year 2001, with those of 2006 in order to see whether or not, a prior expectation are met. Empirical evidence from Table 3 reveals that literacy level has improved. There has been an increase of about 17 percent in adult literacy rate within the five -year period. Contrary to expectation however, primary school enrolment fell from about 76 percent in 2001 to about 57 percent in the year 2006, a decrease of 19 percent. Also, enrolment rates of male and female children reduced over the years. The implication of this decrease in enrolment rate is that more children are likely to be engaged in paid employment. A plausible explanation for this deviation from expectation is that perhaps the parents of those children who are involved in paid employment are not educated and they also do not participate in the adult literacy programme so they are not able to influence their wards.

Table 3: Adult literacy and primary school enrolment

Literacy Level	Child Labour Survey	Core Welfare Indicator Survey
Adult Literary	41.2	58.6
Primary School Enrolment	75.6	56.6
Male	74.6	58.3
Female	64.4	54.6

Sources: (a) Computation based on FOS/ILO/SIMPOC Survey, 2001  
 (b) NBS CWIQ Survey Report, 2006.

## CONCLUSION

The outcome of this study has also supported the belief that education is pivotal to human development in any society. The more educated the household head, the lower the likelihood or the chances that a child will be involved in paid work.

### Policy Implication and Recommendations

The following recommendations are made based on the findings of the study:

There is need for access to education through such measures as provision of more schools, better and more qualified teachers, and improved allowances to those posted particularly to rural areas. Efforts should also be intensified to promote western education especially in the northern zones of the country. This is because western education discourages participation of children in labour as it exposes them to early childhood education.

For gender balance and gender mainstreaming to be achieved in the educational sector, there is the need for more sensitization and public awareness on the education of the girl child, especially in the northern zones where enrolment rates of female children are still lower than those of males. Parents need to be educated on the benefits of gender equality among children, and in the interest and development of the society at large. These sensitization activities may be done through traditional as well as religious leaders.

#### Promoting adult literacy education -

The evidence from the study supports the fact that parental education has a significant influence on child labour participation. Therefore adult literacy programmes should be encouraged.

This is because educated parents are likely to have a better understanding of the returns to education and/or be in a position to help their children exploit the earning potential acquired through education.

Returns to education are an important determinant of human capital investment decision. The decision to enter and to remain in school depends on the expected benefits. If chances of employment after “graduation” are low or transition from school to work is difficult and lengthy, it is likely that children, especially from poor household, will decide to leave school early and begin to work as a child. Youth employment policies, as well as policies aimed at improving school to work transition are likely to reduce child labour and early drop out.

Children may also be enticed to go to school through programmes such as free lunch. This ‘free lunch’ programme may further boost the socio-economic status of unemployed women or mothers who are the potential food vendors in the suggested programme.

## REFERENCES

- Becker, G. 1981. A Treatise on the Family. Cambridge: Harvard University Press.
- Canagarajah, S. and Coulumbe, S. 1997. Child Labour and Schooling in Ghana. Policy Research Working Paper 1934. World Bank, Human Development 3, Africa Technical Families, Washington, D.C.
- Chiappori, P. A. 1992. Traditional Versus Collective Models of Household Behaviour: What Can Data Tell Us? Understanding How Resources are Allocated within Households. IFPRI Policy Brief 8, 39-40.
- Cigno, A. and Rosati, F.C. 2000. Why do Indian Children Work, and is it Bad for Them?

- Discussion Paper no. 115. Bonn: IZA, February.
- Dalhi, G. B. 2001. "Mobility and the Return to Education, Testing a Roy Model with Multiple Markets". *Econometric* 70(6): 2367-420
- FOS/ILO/SIMPOC 2001. National Modular Child Labour Survey Report.
- Grootaert, C. 1998. Child Labour in Cote d'Ivoire: Incidence and determinants. The World Bank Social development Department, (The World Bank: Washington, D.C.).
- Grootaert, C. and Kanbur, R. 1995. Child Labour: A Review Policy Research Working Paper No. 1454, Washington, D.C: The World Bank.
- ILO 2002. International Programme on the Elimination of Child Labour, Every Child Counts. New Global Estimates on Child Labour.
- National Bureau of Statistics (NBS) 2005. Poverty Profile for Nigeria.
- National Bureau of Statistics (NBS) 2006. Core Welfare Indicator Questionnaire Survey, Nigeria 2007.
- Portner, 2001c. Children's Time Allocation in the Lagtma Province, the Philippines. The World Bank, September.
- Psacharopoulos, G. and Arrigada, A. M. 1989. "The Determinants of Early Age Human Capital Formation: Evidence from Brazil". *Economic Development and Cultural Change* 37, 683-708.
- Ravallion, M and Wodon, Q 2000. "Does Child Labour Displace Schooling? Evidence and Behavioural Responses to an Enrolment Study". *Economic Journal* 110 (462): (158-75).
- UNDP (2006). United Nations Development Programme Annual Report.